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ABSTRACT

The purpose of this research effort was to introduce the use of simulations in adult learning situations to enhance communication skills in a creative, effective, and enjoyable manner. Adult educators in academic settings or in business and industry training can use simulations not only to teach a concept but also to improve communication skills at the same time. This paper presents a communications experiment that is a teaching tool, and can be used to make learning communications skills more enjoyable for the participants and thus more effective. If simulations can be used to teach communications skills, they can provide an additional tool for teaching students skills that can enhance their employment possibilities by making them aware of their own speaking and listening skills. The author finds that simulation was an effective tool for participants of this study. It provided a means for students to get to know each other and work together in an interactive environment as well as to identify their personal communications skills and skills that need improvement. This study further indicated that the effectiveness of simulations could be enhanced by tailoring them for specific courses and groups of students. Appended in this report are debriefing topics for discussion, a participant survey, and instructor questions. (Contains 34 references.) (VWC)

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ED 437 079

An Investigation In Adult Educational Learning

To Determine If Simulations Enhance Communications Skills

Thesis Submitted to
The Graduate College of
Marshall University

In Partial Fulfillment of the
Requirements for the Degree of
Master of Science
Adult and Technical Education

By

Doris Brozik

Marshall University

Huntington, West Virginia

May 1999

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And to my loving husband Dallas, the truest purpose of all my efforts,

".....that was yesterday,
today we're going to the beach".

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INTRODUCTION

Communications skills are needed by everyone. These skills are derived from the transfer of information. Communications problems arise when people do not understand what is being said to them. Listeners' minds may be elsewhere; reading a paper, seeing what is on television, looking at items on the bulletin boards or walls in the room, or unwrapping a candy bar. Noises or personal/social problems can create interference. Despite the importance of effective communications, it can be very difficult to achieve.

Communications problems might be further compounded by the possibility that the speaker may talk quickly, softly, or not enunciate or pronounce his or her words clearly. In many instances people do not say what they really mean and assume listeners know what they mean.

Speakers need to be able to say what they want to say. What is said depends on such variables as what speakers want to say, where they are, who they are talking to, and the ability to organize what they say into coherent phrases.

The cultural backgrounds of both the speaker and listener are important considerations in the transfer of information. Some words or

phrases may mean different things to different people. The attitudes of the speaker and listener are reflected in their communications skills.

Statement of the Problem

Communications is the key to individual success and survival in today's world. The process where new skills, knowledge, abilities, and attitudes are created is through the transfer of information. The problem with communications is the way in which people talk and listen. Without proper communications skills, people will not be able to achieve their full potential in the modern world. The problem investigated in this study is to determine if the use of simulations in Adult Education situations improves the adults' ability to identify their own communication strengths and weaknesses.

Purpose

The purpose of this research effort was to introduce the use of simulations in adult learning situations to enhance communications skills in a creative, effective, and enjoyable manner. Adult educators in academic settings or in business and industry training can use simulations not only to teach a concept but also to improve communications skills at the same time. This paper presents a communications experiment that is a teaching tool which can be used to make learning communications skills

more enjoyable for the participants and thus more effective. Players, as speakers, are led to understand the necessity of saying exactly what they mean, speaking clearly, and using appropriate terminology. Players, as listeners, recognized the importance of focusing on what is being communicated and interpreting that communication in a meaningful way. They realized how important it is to focus their active attention on speaking and listening, disregarding extraneous noises and issues.

Research Questions

The use of a simulation to teach communications skills will allow the following research questions to be tested.

1. Does the use of simulations/games help students learn communications skills?
2. Does participation in a simulation/game allow participants to identify their own level of communications skills?
3. Does gender affect a person's ability to learn communications skills using simulations/games?
4. Does the use of a simulation help in the teaching of communications skills?

Significance of Study

The significance of this study is to determine whether a simulation/game can be constructed that will allow participants to enhance their communications skills. If simulations can be used to teach communications skills, they can provide an additional tool for teaching students skills that can enhance their employment possibilities by making them aware of their own speaking and listening skills.

It may be significant that a new technique can be used to address a well established problem. New techniques for training and education are continually sought for addressing these problems. Training will continue to be of extreme importance to the society as it continues to move forward into the millennium. Educators need an array of teaching tools at their disposal and simulations make learning easier and more enjoyable for the adult learner.

Definition of Terms

Terms used throughout this study are operationally defined as follows:

Adult---a person enrolled in and taking classes at a regional state university.

Communication---the exchange of ideas in a conversation among people such as talking and hearing.

Communications skills---the process of communication through which learning can take place.

Debriefing---post-game discussions where participants review what happened during the game and reflect on their communications skills.

Hometown--state or country where participants lived before attending Marshall University.

Participant---anyone involved in the simulation.

Simulation---an exercise designed to enhance the learning through interaction among the participants.

Trading---the act of exchanging goods.

Limitations of Study

The generalizations made as a result of this research study are subject to the following limitations:

1. College students who were the subjects may be attuned to using communications skills in the education process.

2. Research was conducted in classroom settings that were already established, therefore, some individuals might already have known each other.
3. The simulation is conducted only one time:
   a. Changes in learning skills might not show because skills are learned over long periods of time.
   b. If any changes are evident, it might indicate the simulation has a powerful potential.
4. The population is primarily regional, therefore, the sample is geographically biased.
5. It is accepted that no research is value free or bias-free (Denzin & Lincoln, 1994, pp.212).
6. College students were selected who represent a certain segment of the population.
7. Participants must speak and share a common language, in this case, English.
8. Due to the fact that a convenience sample was used, the researcher recognizes that biases may be inherent in the findings.

REVIEW OF RELATED LITERATURE

Communications skills are important aspects of interpersonal relationships both in personal and business settings. Communications skills are the medium through which learning can take place. In the broadest sense, communication means the exchange of information among people in a conversation, for example, speaking and listening. Some authors suggest the meaning of communication is "an assumption that reflective listening is at least as important in the conversation as active speaking" (Baker, Jensen, & Kolb, 1997, p. 9). Krashen, 1982 says "The best input is the input that we naturally give people when we talk to them so that they can understand" (Scarcella & Crookall, pp.224; cited in Crookall & Oxford, 1990). Although the words spoken are important, the selective screening process a person brings into a conversation limits his or her perception of what is being communicated.

The discipline of Language Arts includes reading, vocabulary, spelling, punctuation, and grammar (Randel, Morris, Wetzel & Whitehill, 1992), but these mechanical skills do not guarantee that actual communications will occur. It is therefore important to develop and implement techniques that will improve communications skills.

Active Learning

Teachers who are aware of the close relationship between the learning process and the learning environment are in a position to develop situations that promote an environment conducive to learning. Student involvement is important and can only happen through responsibility shared by teachers and students. Many authors emphasize the positive aspects of the active learning approach and describe such methods as better alternatives to the traditional lecture form (Johnson & Johnson, 1991; Carlson & Scalded, 1995; and Haupert, 1996). Lectures suffer because they are a one-way communication in which the student is a passive participant--merely a listener. On the average a listener's attention span ranges from 10 to 20 minutes but most class periods last 50 to 75 minutes. Some authors who are experts in educational methods say students, kindergarten through adulthood, learn best when they are actively engaged (Pantiz, 1996). Studies have shown that active participation by students results in more favorable students attitude towards learning (Johnson, et al., 1991; and Becker & Watts, 1995). Students learn by making discoveries, reflecting on them, and discussing them (Heuwinkel, 1996). Research tells us that learning is based on motivation and active involvement in the learning process. Proponents of

the learning cycle strategy believe it can be used for every subject and at every grade level to meet the needs of diverse learners (Silver, 1998). For that reason many teachers have creatively involved students in active learning.

The concept of active student participation is simple. The teacher presents facts or scenarios to the students, and the students play an active role in learning by communicating among themselves. The students learn a way of interpreting observations by improving their communications skills through speaking and listening. This interaction takes place between the speaker and the listener (Goodwin, 1981). Active learning can take many forms such as group discussions, role playing, or even simulations. The important aspect of active learning is the creation of student participation. In simulations the class members or participants are active learners. An example of how simulations are constructed can be found in A Handbook of Structured Experiences for Human Relations Training (Pfeiffer & Jones, 1973).

Simulations allow learners to create their own communication realities. Simulations have been successfully designed to meet a number of teaching and training objectives including increasing motivation and interest, skill development, attitude change, and self-evaluation (Crookall

& Oxford, 1990). In a simulation, communication may proceed uninterrupted by teacher intervention, just as it does in most other situations, allowing participants to grasp and convey meaning in a more natural way. Active involvement in communications skills is essential.

Adult Learning

Many students attending college today are not "young people" (Culross, 1996). They are adult students seeking a degree for the first time, returning to school after taking time out to raise children and support a family, or taking courses to retrain for a career change or job displacement. Some authors suggest that everyone, young or old, well-educated or not, rich or poor, can enhance their life style through education or the learning process. The most often quoted definition of learning style in adult education literature is the "individual's characteristic ways of processing information, feeling, and behaving in learning situations" (Smith, 1982, p.24; cited in Knox, 1991).

While chronological age is widely recognized as a poor indicator of "adult" status, it is commonly used in research where adult views and behavior are sought separately from those of preadults. It is common knowledge that all adults experience some physical changes as they age. It is also known that adults compensate for physical changes such that

learning may not seem affected at all (Tennant, 1988; cited in Knox, 1991).

Adults need active learning experiences, especially if they are expected to reinforce the theories about teaching and learning that they have found to be effective for most of their lives. In 1985, Kamii (cited in Burk, 1996) indicates that deviating from the traditional lecture format of university classes is a difficult adjustment for adult students. Kamii, 1985 (cited in Burke, 1996) also suggests that teachers should encourage the exchange and coordination of points of view among peers. This way adults would feel responsible both to justify his or her position to respond to another person and to listen to the other person's views. It is the adults' responsibility as learners to participate in all activities as well as to provide personal insights. Learners should encourage other adult learners to participate, provide important and relevant feedback to one another, and should give the facilitator open and honest feedback (Gilley, 1991).

Most authors acknowledge the importance of using groups in adult education for common themes and related issues (Imel, 1996). By their nature, group activities appeal to different learning styles more than lectures or information presentations do. Groups support the learning of individuals. Varying types of group activities can address some

differences within adult learning styles. Some common group learning techniques include discussion, gaming, role play, simulations and projects. Simulations are often used in adult learning groups to promote learning (Heimlich, 1996). Simulations are techniques which enable adult learners to obtain skills, knowledge, or behaviors similar to those in real life. They get adult learners involved cognitively as well as emotionally (Gilley, 1991).

Simulations are very effective alternatives for adult learning styles. They encourage adults to play with different ways of learning. Playing takes learning away from the traditional academic world and into the realm of pleasure and enjoyment. While there are differences in the ways adults learn communication skills, simulation nevertheless brings back a touch of the old, long-forgotten magic of discovery (Oxford & Crookall, 1990).

Simulations

Games can generate interest and involvement (Boocock & Schild, 1968). Simulation as a general category may contain elements of games and role-play, and simulation/gaming refers to the field as a whole (Crookall & Oxford, 1990). The essence of a simulation is interaction. Simulations in and of themselves teach, and players learn from their

participation in the exercise (Schild, 1968). Simulation provides the opportunity to identify communications skills and because simulations are experimental, they provide settings where alternative behaviors can be examined without risking the unwanted consequences of real-life situations (Shoemaker & Shoemaker 1991).

In simulation situations active students can encourage the participation of shy and quiet students more than in conventional learning situations, and this creates an environment that supports different personalities and learning styles. A good simulation also takes into account as many aspects of the theme as possible, including chance happenings. This provides additional support for the personality characteristics of the individual participants (Horizon Consulting, 1993). Simulations can thus be used to display, experience, and experiment with differences in communication style (Scarcella & Crookall, pp. 229,1990).

Use of Simulations

Communication requires being able to understand and be understood. Both simulation and communication need to interact with each other in various ways. Each can provide a better understanding of the other--communication enables us to understand simulation, and simulation does much to help us understand communication.

Communication between the two fields should help draw them together as one theme (Crookall & Saunders, 1985).

One teaching technique that has proven valuable in many fields is the use of simulations, but studies involving the use of simulations to teach communications skills, other than language arts skills, are not widely available. Simulations are inherently communications driven but normally designed to lead to other outcomes. For students simulations provide the opportunity to identify communications skills in others (Shoemaker & Shoemaker, 1991). In papers by DeVries & Slavin (1976) and Frederiksen, et al., (1983), (cited in Randel et al., 1992) five out of six studies that were reviewed demonstrated that simulations can teach language arts effectively, particularly when specific objectives are targeted. In 12 out of 14 studies, students reported more interest in simulation activities than in more conventional classroom instruction according to Cherryholmes, 1966; Cohen, 1969; Pierfy, 1977; Whitehill & McDonald, 1990 (cited in Randel et al., 1992). Twenty-two studies were reviewed by Pierfy, 1977, (cited in Petranek, Corey & Black, 1992) find that simulations have a significant advantage over traditional instruction when it comes to changing attitudes and student interest.

Reasons often cited for using simulations are: "...it motivates and is fun; it is more congruent with the learning process than chalk-and-talk teaching practices, it is more like the real world than the traditional classroom, and perhaps most significantly, simulation results in positive outcomes, such as more active participation, improved performance, greater retention, and better understanding" (Crookall & Oxford, 1990, pp.14).

Other research has shown that during a simulation participants unconsciously process all types of information through the involvement of speaking, listening, reading, and writing (Crookall & Oxford, 1990, pp.111). Since simulations have proven of value in other disciplines, it should be possible to develop simulations that can be used to teach communications skills.

Advantages of Simulations

"Simulations have affective advantages, such as reduction of anxiety, increase in positive feelings, and improved self-confidence" (Crookall & Oxford, 1990, pp.112). Simulations reduce anxiety in several ways. Participants are under less pressure to produce than they may be in other situations. The advantage of simulations is helping students to

build positive self-image. Reduced anxiety encourages the simulation participant to communicate more.

Another advantage of simulations is that learners are active participants rather than passive recipients of information. Learners using simulations activities are allowed to make mistakes that will not affect the outside world. Simulation discussions are realistic and feedback is immediate, which provides for a system that encourages involvement. Learners are more receptive to new ideas and attitude changes when provided through simulations. Simulations are a cost effective method of learning because it allows a number of learners to participate in a learning experience at the same time. Through the use of simulations, learners should have an increased awareness of themselves and be able to apply new knowledge, skills, or attitudes to real life situations (Gilley, 1991).

Important Aspects of Simulations

One important characteristic of simulation is its capacity to allow a wide range of complex and varied communication patterns and social relationships to develop (Scarcella & Crookall, 1990). The most important aspect of simulations is that they force the participants to communicate. Simulations provide that a consciously intended move made by one

participant must be considered by the other participants and have much the same meaning for all of them (Goffman, 1981).

Other authors (Blume, Kim & Sobel, 1993; Crawford et al., 1982) have studied the issue of whether messages in simulations take on commonly understood meanings that permit the informed player to communicate effectively when it is in his/her interest to do so. The sender has private information; the receiver must take action relevant to both participants' outcomes without knowing how much information may have been withheld by the sender. For conversations to be successful, participants are required not only to produce sentences but also to coordinate, in a meaningful way, their talk with the talk of others present (Goodwin, 1981). A simulation designed specifically to teach communications skills could have an even greater impact on the participants.

Variables and Their Effectiveness of Simulations

In 1981, Bredemier and Greenblat (cited in Randel et al., 1992) identified some important variables that might affect the outcome and effectiveness of simulations. These variables include personality, cognitive learning style, gender of participants, group variables, academic ability, game ability, and administrative variables such as teacher bias

toward a particular teaching method (Knox, 1991). The differential effectiveness of learning methods in relation to learner characteristics and outcomes is a strong reason for using a variety of teaching methods. Variety can increase learner interest as well as enhance various aspects of desired skills. The effectiveness of simulations also depends on the realism of the simulation and having as much time to discuss the experience as to engage in the simulation (Knox, 1987). It is reasonable to assume that such variables will be important in all games and therefore must be taken into account when creating games that develop communications skills.

Debriefing Process

After a simulation has finished the facilitator will want to receive feedback from the participants. The object is to discuss with them what they learned, whether the activity was successful, why and how certain decisions were reached, and what changes should be incorporated into future simulations (Harmer, 1994). The debriefing process is critical to the effectiveness of using simulations in any setting. Debriefing, in general, refers to the post-game discussions of the concepts learned, generalizations made, and the relevance of the simulation. "The objective of the post-experience discussion is to provide the learners with

mechanisms that encourage self-reflection and that assist them in making connections between experience and cognition" (Lederman, 1984, pp.429; cited in Petranek et al., 1992). The debriefing should be designed to help students reflect on their learning (Petranek et al., 1992). During the debriefing the facilitators should keep in mind the value of a profound respect for each participant in the conversation, including the assumption of the wisdom each has to offer, and an assumption that reflective listening is at least as important in the conversation as active speaking (Baker et al., 1997). Gilley (1991) and Heimlich (1996) suggest some questions that foster enacted learning might include:

1. Why did the participants think this activity was done?
2. What did the participants learn from the exercise?
3. What types of interaction occurred between the participants?
4. What personal reactions did the participants have to each other during the context of the simulation?

The debriefing may take more time than the simulation itself, and it must be considered at least as important as the simulation (Bullard, 1990). Although not all authors agree on the educational effectiveness of debriefing (Randel et al., 1992), it is especially critical in determining how the participants recognize the importance of focusing on what is being

said and how they interpret what they hear (Brozik & Zapalska, 1996). The importance of the debriefing process is vital in transforming experience into learning (Thatcher, 1986; Baker et al., 1997).

Debriefing following a simulation allows for meaning to be constructed by the participant from the experience. It is not just about what is said or done but also includes how, by whom, and when something was said or done, as well as what function the action served in what group context. Assumptions made by Lederman, 1984, p.420 (cited in Petranek et al., 1992), state: "Thus, particularly in terms of evaluation and measurement of effectiveness of learning, the post-experience analytic process is critical to learning. It is in the post-experience analytic discussion that learning is explored and measured." The importance of debriefing in these other areas indicates that it will also be vital in the development of games that teach communications skills.

Demographics

Communication has culture-specific aspects. The need to understand other cultures is important. These cultures may be ethnic or national, but cultures have also built up around academic and practical pursuits. Simulation has a culture of its own, and so does communication as a field of study, if only in their use of jargon (Crookall & Saunders,

1989). Using simulations in classrooms is the general principle of providing students with a relatively safe learning environment in which they may practice and develop a range of communication skills. Simulations help students learn more efficiently by making the language learning experience real. Only by communicating with each other can participants in simulations tackle problems, negotiate meanings, define realities, and make decisions. Simulation provides a useful training environment for the development of communications skills (Crookall & Oxford, 1990).

Speaking and being listened to in our society are privileges that are taken for granted by males in our culture (Johnson-Bailey & Cervero, 1997) while being taught to speak less often and to seldom break into conversations is behavior that is learned by females (Sadker & Sadker 1994). Simulations continue to be one of the safe places where women can examine the predominantly male culture. Some authors, such as Stern, 1985 p.224 (cited in Crookall & Sanders, 1989) state: "The existence of a place where one can try on roles as 'the other' in order to see what makes the opposite half tick is an important prologue to increasingly positive gender communication and interaction throughout the world".

The enjoyment of games is not restricted by age. It is generally accepted that young learners and adults are very willing to play games. There is no one group on which to focus when addressing race and ethnicity of participants. Simulations encourages all participants to become active. Groups for simulations activities can be formed to allow males and females of any age, race, cultural, and ethnic status to engage in communication with each other.

Biases

Each individual involved with a simulation may have different concerns and perspectives, or personal and unreasoned opinions regarding a situation (Irvine, Levary & McCoy, 1998). Some adults have had good experiences in group activities; others have not. Those who have not may be biased against using simulations as a learning tool, and therefore facilitators should expect participation and move quickly into an activity rather than wait until consensus is formed about participating (Heimlich, 1996).

Simulations can give practice in all the skills (reading, writing, listening, and speaking) in all stages of teaching and learning, and for many types of communications. A teacher's skills, however, must be regarded if simulations are to be meaningful. The teacher's own belief in

the usefulness and appropriateness of a simulation affects the learners' response (Wright, Betteridge & Buckby, 1984, 1996).

Designers and users of simulations might have different opinions regarding the way in which simulations should be evaluated, causing judgmental biases, or opinions formed by a knowledgeable process based on experience, self-confidence, and authority (Irvine, et al., 1998). For example, some judgmental bias may come as a result of data availability or data use or as a result of carelessness in the design process. An effective way of minimizing the impact of judgmental bias is to evaluate the possible introduction of biases during each phase of the model development (Irvine, et al., 1998).

Communications skills, being an important aspect of interpersonal relationships, provide a medium through which active learning can take place in adult education. Many authors emphasize the positive aspects of active learning in classrooms by using alternative teaching methods. Simulations, properly designed, have been found to meet a number of teaching and training objectives which include student motivation and interest, skill development, attitude change, and self-evaluation perception. Simulations have also been found as effective alternatives for adult learning styles. Through the interaction of simulations, players learn

from participation. Several authors indicate that the reflective discussion process which follows a classroom simulation is critical to the effectiveness of using simulations and provides learners with tools to assist them in transforming experience into learning.

METHODOLOGY

This simulation was intentionally designed to be used by individuals at all levels. It is intended to allow persons of all backgrounds to identify and improve their communications skills.

Population and Sample

Simulations were conducted in classes with students from various backgrounds. The results of these simulations were analyzed along demographic lines such as gender and ethnic background. This analysis identified the overall usefulness of the simulation and whether or not demographic factors influence a student's ability to learn through use of simulations.

A convenience sample was selected to study individuals' communications skills utilizing simulations as an alternative teaching method to the more traditional classroom lecture style. The convenience sample was chosen as the sampling procedure for the study due to the availability of classes of students in a university setting. Generalization of this study applies only to those involved in the actual simulation, but it can possibly be used for future studies of learning communications skills through simulations.

The researcher recognizes the biases of a convenience sample, however; the group studied represents a variety of individuals from various backgrounds and ages, all of whom were taking college level classes to enhance their adult learning skills. This study included a sample comprised of college students from the population of Marshall University and Marshall University Community College during the Fall semester, 1998. The participants for the simulations study were from various college level classes, for example college freshman, sophomore, junior, and senior class levels, graduate students, and community college students. Ten classes were studied with one class being studied at the beginning of the semester and again at the end of the semester. This serves as an indicator to examine the learning effectiveness of using simulations with communications skills over a period of time after the participants' initial awareness of their skills level.

The classes studied for this research were from a variety of educational disciplines selected on the basis of examining participants' use of communications skills from different backgrounds and their different interests. Student class disciplines included such majors as but not all inclusive: Psychology, Management Information Systems, Chemistry, History, Nursing, Finance, Marketing, Business Management,

Engineering, Counseling, Accounting, Health Care Management, Economics, Sports Management, and Adult and Technical Education specialities. The classes consisted of both male and female students of various ages. There was no distinction made of cultural background or national origin of the students. However, the population for this study was primarily regional causing the sample to be geographically biased.

The study took place during normally scheduled class times with pre-arranged approval of the instructors. Regularly scheduled classes and classrooms were used. Instructors were asked to observe and comment on the study during the simulation and debriefing processes.

Design and Procedures

1. Design Structure

The design for this study is "one-shot case study design". There is no comparison group nor a pre-test or post-test. According to Fraenkel & Wallen (1996) the "one-shot case study" is an appropriate design to study teaching methodology. This design was selected because there are no numerical comparisons that can be made (Fraenkel & Wallen, 1996. pp. 267-268).

2. Formation of Groups

Each class was divided into groups of approximately equal size by using a random numbering system. Each student was assigned a number, one through six, which was used to form the groups. All "ones" formed a group, all "twos" formed a group, and so on. The number of students in the class determined the number of groups formed.

Data Collection and Procedures

1. Data Collection

The data collected and analyzed for this study was collected only by the researcher to prevent the threat of collector bias (Fraenkel & Wallen, 1990, pp. 245-246). The data was collected from selected college classes with no bias toward class level, student ages, class discipline or student major, or cultural backgrounds. The same methods for collecting data were used in each class; controlling the length of time of the simulation so as to be consistent in all classes, and using the same questions and surveys for each class. Questions and surveys were developed for the purpose of investigating the use of simulations in Adult Education situations to determine if simulations improves the adults' ability to identify their own communication strengths and weaknesses.

A. Validity

Validity of the use of simulations in research is based on the results of the simulation model. Content-related evidence of validity refers to the content and format of the instrument used to assess the results the researcher wishes to obtain from this study (Fraenkel, & Wallen, 1990, pp.154-157). This study used a debriefing session after the simulation was played followed by questions and surveys to examine the results of the simulation model used.

After administering the same simulation to ten separate classes, and using the same methods for each, the consistency of the data collected indicated the reliability of the study. Participants involved in the study may have answered questions differently, but their answers reflected to the subject at hand.

B. Instrumentation

A list of questions and two surveys were developed to gather information for this study. The instruments were reviewed by a panel of three experts in the use of this particular simulation to assure the validity of the questions. The expert panel consisted of Dallas Brozik, Ph.D, Finance; Alina Zapalska, Ph.D., Economics; and Wendell Sweetser, Ph.D., Economics. A list of questions the facilitator used for the debriefing

discussion period is attached (Appendix A). Written surveys (Appendix B and C) were given to students and instructors to gather additional information concerning the simulation. These surveys were gathered at the beginning of the next class period by the instructors and returned to the researcher of the simulation experiment for analysis.

2. Procedures

Once the groups were formed, each group received a list of items that they had available and a shopping list of items that they needed. After a few minutes to plan group strategies, each group began trading with the other groups to acquire the needed items.

The stated goal of the game was to maximize wealth, but the actual goal was to examine those communications skills which permit successful trading in the market. Students were unsure about how to gather the information they needed and were forced to discover how best to communicate with others to achieve their stated goal. Participants generally learned by themselves in interaction with others. The simulation was paced so that the participants had time to discover and act upon sufficient information to demonstrate the desired goal.

The facilitator for the simulation was the researcher who assisted in the design and development of this simulation for use in other disciplines.

The facilitator had a through knowledge of the simulation and methodology for instructional purposes and adult learning theory.

While the students were busy trading, the facilitator observed the participants' communications skills and the gathering and processing of information. The facilitator circulates among the groups sometimes suggesting that they move around and talk to participants in other groups, observed and listened to participants' communications skills, offered suggestions where appropriate, and provided reassuring comments to those participants who seemed to not be doing well. This active portion of the simulation lasted about 25 minutes, leaving approximately 20 minutes of a regular scheduled 50 minute class period to be used in the debriefing process of the simulation. When the trading portion of the game closed, the groups were given time to identify all the items that they currently had in their possession.

A debriefing period began summarizing the gains and losses of the groups in a generalized way. During the debriefing, the facilitator turned the discussion to the participants' own communications skills awareness, feelings, and game effectiveness. The facilitator approached the process with background and experiences that may have become a part of the process. The interaction between the facilitator and the participants

during this debriefing period was usually lively and very interactive. This debriefing was the actual goal of the simulation, making students involved in and responsible for their own communications skills awareness.

RESULTS AND DISCUSSION

The data collected during this study was qualitative and quantitative information obtained from classroom settings. Information collected reports the actual number of classes studied, the class disciplines, and the number of students and teachers participating in each simulation. The results of the written surveys show the identification and improvement of communications skills characteristics as determined by the participants. Insight gained from the instructors' surveys examines the effectiveness of using simulations to enhance the learning of communications skills.

The sample on which the findings are based consists of ten classes, one class being studied twice, once at the beginning of the semester and once at the end of the semester for comparison purposes. The number of student responses totals 158, excluding the number from the second study of one class. Instructor responses totals four.

The survey instrument used to provide information for analysis of the participant portion of this study is in the form of a questionnaire (Appendix B). Demographic information of the participants appears first on the questionnaire. Analyses of class disciplines studied were grouped together according to Business, Education, Science, and Community

College, and all Other disciplines were grouped as one category. Ethnic backgrounds of the participants were examined. As a result of the questionnaire pertaining to Hometown, it was determined that the majority of participants (136 or 86%) were West Virginia, Ohio, and Kentucky residents. There were 18 (11%) students from various other states and countries. The number of students not providing Hometown information was 4 (3%), but they did answer other questions. Therefore Hometown category was not used in the analysis results since it would not provide meaningful background information for comparison purposes. Not all respondents provided all demographic information and not all respondents answered all questions. Therefore percentages may appear to be off by a small amount.

Questions 1 through 4 in Appendix B are preparatory to question 5. These four questions were designed to sensitize respondents to communications skills they had observed during the simulation. By asking participants to identify personal and group strengths and weaknesses, it was felt they would provide more complete answers to questions 5 which relates to the entire simulation experience. Questions 1 through 4, and information from the debriefing exercise (Appendix A) also provide qualitative information concerning individual experiences.

Question 5 (Appendix B) provides the information used for the analysis. It consists of two parts. The first part of the question pertains to the participants' identification of communications skills using simulations, and the second part of the question asks if simulations improve communications skills.

A series of Figures showing the results of the study by variables are presented. A discussion of these Figures show the identification of communications skills and improvement of communications skills using simulations and consist of Gender (Figures 1 and 2), Academic Majors (Figures 3 and 4), Class Level (Figures 5 and 6), and Ethnic backgrounds (Figures 7 and 8).

Simulation and Gender

There were a total of 158 students participating in the simulations to study communications skills enhancement. Of the 148 students who answered question 5, 76 (48%) were female and 73 (46%) were male. There were 9 (6%) respondents who chose not to reveal their gender but did respond to other parts of the questions.

Figure 1 reveals that 58 (81%) of the Females who responded to the first part of questions 5, "Do you feel this simulation helped you identify your communications skills?", did feel that the simulation helped

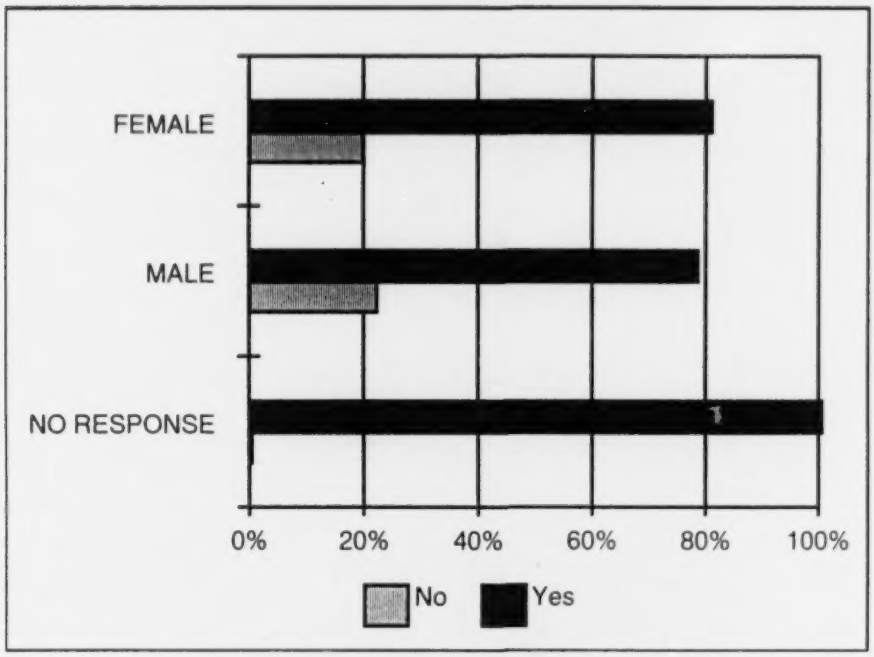

Figure 1. Degree to which simulation helped identify communications skills by gender. (N=148)

identify their skills while 14 (19%) did not. Of the Male respondents, 53 (78%) indicated that the simulation did help them in the identification process, and 15 (22%) said it did not help them. All 8 (100%) of the No Response gender participants felt that the simulation did help them identify their communication skills.

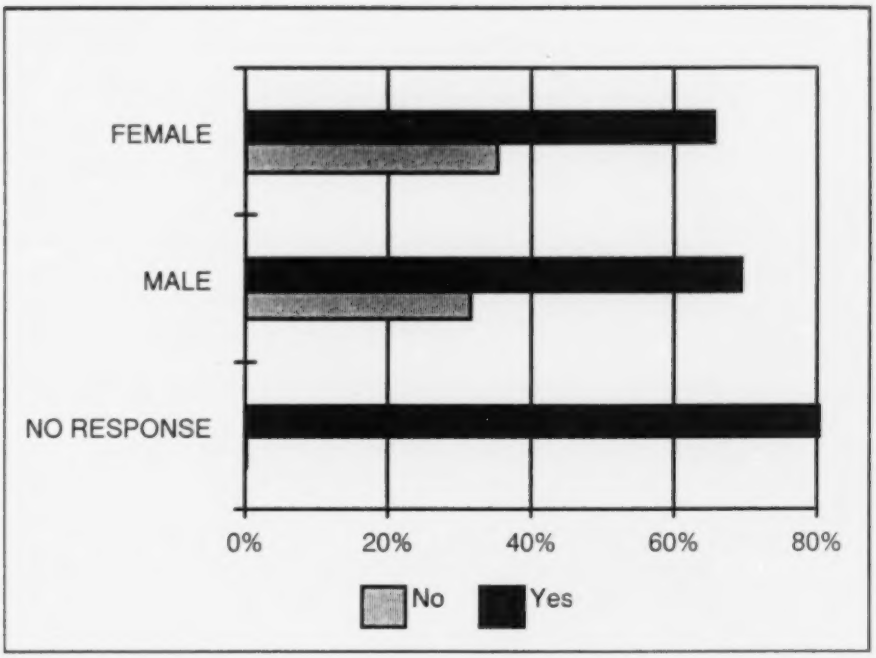

Figure 2. Degree to which simulation helped improve communications skills by gender. (N=145)

The second part of question 5 is shown in Figure 2, "Do you feel this simulation helped you improve your communications skills"? and was answered by 145 students, 69 (48%) Females and 68 (47%) Males. There were 8 (6%) respondents who did not specify gender but did answer other parts of the questions. While 45 (65%) of the Females responding said "yes, the simulation helped", 24 (35%) said "no, the simulation did not help". Males answering this question indicated that 47

(69%) thought simulations were helpful in improving their communications skills, and 21 (31%) did not think it helped improvement. All of the No Response gender participants 8 (100%) felt that the simulation did help them improve their communication skills.

It is interesting that the number of respondents to question 5 did not differ very much (76 females versus 73 males). Based on gender the majority of the participants felt that the use of simulations did help them identify and improve their communications skills.

Simulation and Academic Major

The number of participants in the simulation by academic major totaled 158. Business majors proved to be in the majority with 88 (56%) participants of which 80 (54%) answered the first part of question 5, and 79 (54%) who answered the second part.

There were 22 (14%) Education major participants, 21 (14%) answered part one of question 5 and 19 (13%) answered part two. Science and Other majors each had 15 (10%) participants, 15 (10%) who answered both parts of question 5. The Community College had 13 (8%) participants with 12 (8%) answering both parts of the question. There were 5 (3%) participants who did not specify a major but answered other parts of question 5.

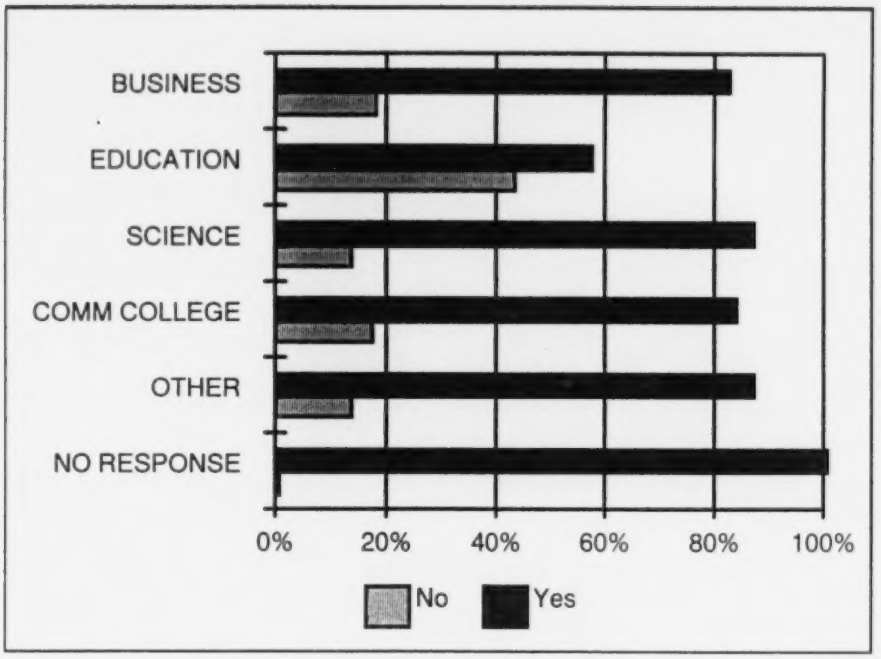

Figure 3. Degree to which simulation helped identify communications skills by major. (N=148)

The first part of question 5 is shown in Figure 3, "Do you feel this simulation helped you identify your communications skills"? Business majors and Community College participants indicated that over 66 and 10 (80% each) felt simulations did help identify communications skills while less that 14 and 2 (18% each) of both majors did not. While 12 (57%) of Education majors said that the simulation did help in identification process and 9 (43%) said it did not. Science and all Other majors who participated

in the simulation reported equal numbers of 13 each (87%) saying that "yes, simulations helped" while the other 2 (13%) said it did not help. All 5 (100%) of the No Response participants stated that they felt simulations helped them identify their communications skills.

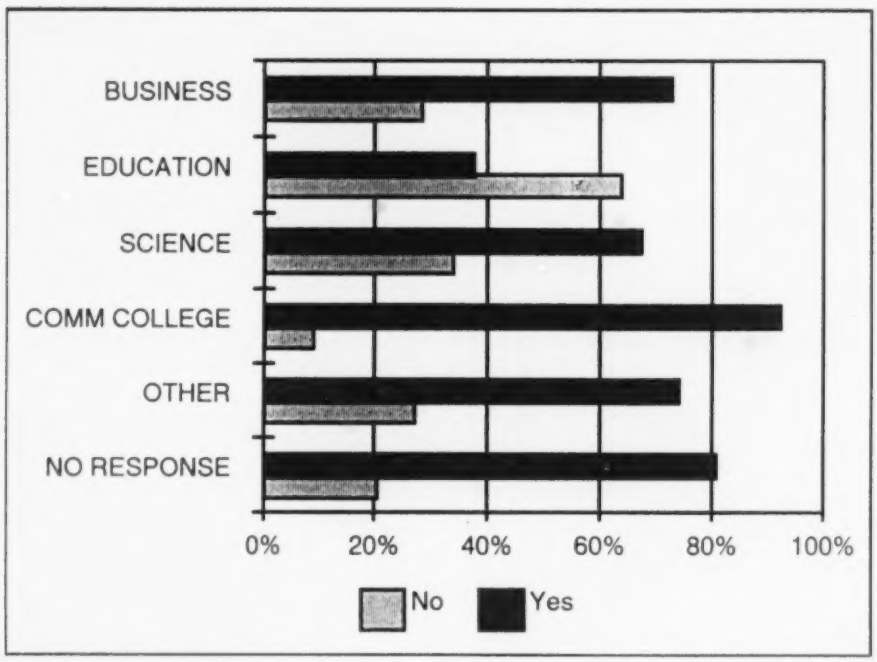

Figure 4. Degree to which simulation helped improve communications skills by major. (N=145)

The second part of question 5 is shown in Figure 4, "Do you feel this simulation helped you improve your communications skills"? While

57 (72%) of the academic Business majors responded that simulations did help improve their communications skills, only 7 (37%) of the Education majors indicated simulations helped them improve. Only 22 (28%) of the Business majors responded that simulations did not help improve their communications skills, however 12 (63%) of the Education majors said simulations did not help them. Community College majors who participated in the simulation indicated that 11 (92%) felt the simulation helped them improve their communications skills while only 1 (8%) did not feel it did. All Other majors showed 11 (73%) felt the simulation helped them, and 4 (27%) felt it did not. There were 4 (80%) No Response participants who stated that they felt simulations did help them improve their communications skills and 1 (20%) did not.

It is interesting that Education majors showed that a smaller percentage of respondents felt that simulations helped in the identification process of communications skills than other majors. It is more interesting that 63% (more than other majors) felt that simulations did not help improve communications skills. This may be related to the fact that these Education majors are older students in a Graduate class and may have more academic knowledge and experience in communications skills in their careers. The other end of the scale shows an extremely small

number of Community College participants, only 1 (8%) stating that the simulation did not help improve their skills. This may be attributed to a younger and inexperienced group of people. This could indicate that some communications skills develop with age and experience.

Simulation and Academic Class Level

The survey of participants by academic class level who responded to the first part of question 5 totaled 148 while the second part had a total of 145. College Seniors proved to be the majority of the participants 64 (40%), followed by Juniors 36 (23%). Graduates were the next highest number of participants in the simulation study with 25 (16%). Freshman and Sophomore class levels had an almost equal number of participants 14 (9%) and 17 (11%) respectively. Less than 2 (1%) of the participants surveyed did not specify a class level but responded to other parts of question 5.

The first part of question 5 is shown in Figure 5, "Do you feel this simulation helped you identify your communications skills"? Freshman participants indicated that 11 (79%) felt simulations did help identify communications skills while 3 (21%) did not. Over 13 (81%) of the Sophomores said that the simulation did help in identification process and less than 3 (19%) said it did not. Of the Juniors who participated in the

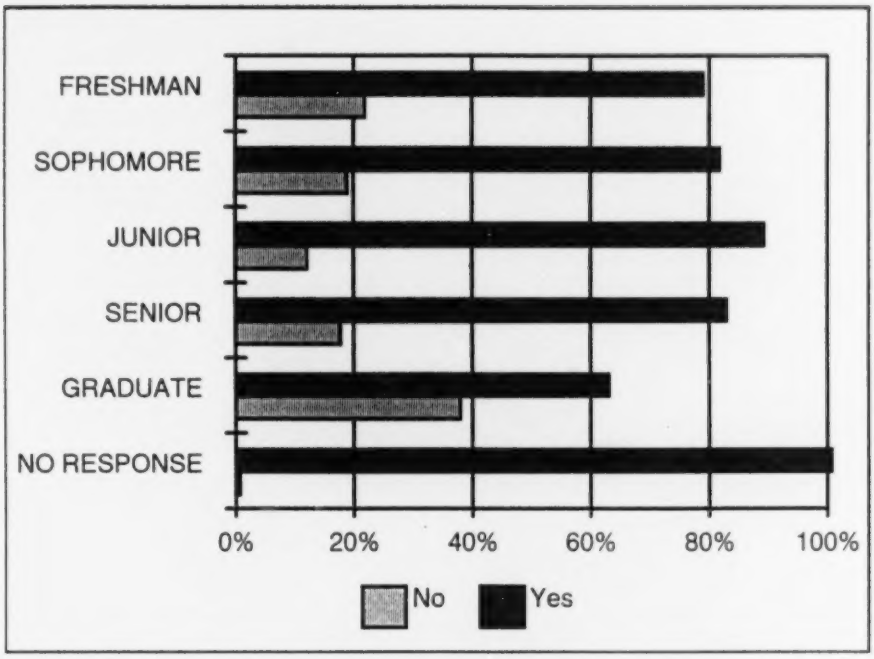

Figure 5. Degree to which simulation helped identify communications skills by class. (N=148)

simulation 31 (89%) said that "yes, simulations helped" while the other 4 (11%) said it did not help. Over 47 (82%) of the Seniors stated that they felt simulations helped them identify their communications skills, but less than 10 (18%) did not feel it helped. Graduates reported that 15 (63%) said the simulation did help the identification process and 9 (36%) said it did not. In the No Response category, 2 (1%) students indicated that in

both part one and part two of question 5 that they did benefit from the simulation.

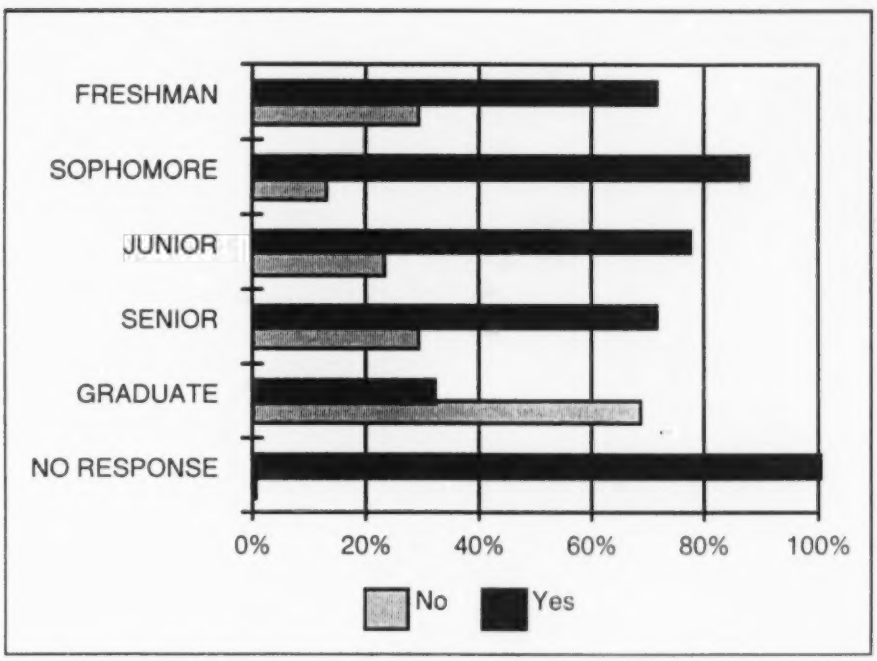

Figure 6. Degree to which simulation helped improve communications skills by class. (N=145)

The second part of question 5 is shown in Figure 6, "Do you feel this simulation helped you improve your communications skills?" with 145 respondents. The 10 (71%) Freshman who responded to this part of the question said that simulations did help improve their communications

skills; 4 (29%) of them said it did not help them improve. While 14 (88%) of the Sophomores responded that simulations helped improve their skills, only 2 (12%) said it did not. Participants in the Junior class level indicated that 27 (77%) felt the simulation did help improve their communications skills, however 8 (23%) said it did not help them. The survey results show that 40 (71%) of the Seniors who participated in the simulation indicated that they felt the simulation helped them improve their communications skills while 16 (28%) did not feel it did. In response to the question 5, 7 (32%) of the Graduate participants felt the simulation helped them, while 15 (68%) felt it did not help improve their communications skills.

It is interesting to note that the Freshman and Seniors showed similar percentages to both parts of question 5. Sophomores indicated a much higher percentage of participants showing they improved their communication skills through the use of the simulation with Juniors only slightly behind. Whereas more of the Graduate level participants indicated the simulation did help them identify their communication skills than those that did not, over half of them said that it did not improve their skills. As with the variable of academic majors, these results could be

attributed to their advanced educational knowledge and career experiences.

Simulation and Ethnicity

The survey of participants by Ethnicity who responded to the first part of question 5 was 148, while 145 responded to the second part. Caucasians were the predominate participants in this study with 137 students (87%), therefore the results for other Ethnic groups may not be meaningful. There were 9 (6%) African American students participating in the simulation. Native Americans participating were the next highest number of participants with 4 (2%). There were 3 (2%) Asian and 3 (2%) Hispanic participants. Of the participants surveyed 2 (1%) did not specify a ethnic background.

The first part of question 5 is shown in Figure 7, "Do you feel this simulation helped you identify your communications skills"? African American participants indicated that 7 (78%) felt simulations did help identify communications skills while 2 (22%) did not. Only 1 (33%) of Asians said that the simulation did help in identification process and while 2 (67%) said it did not. Of the Caucasians who participated in the simulation 103 (81%) said that "yes, simulations helped" while the other

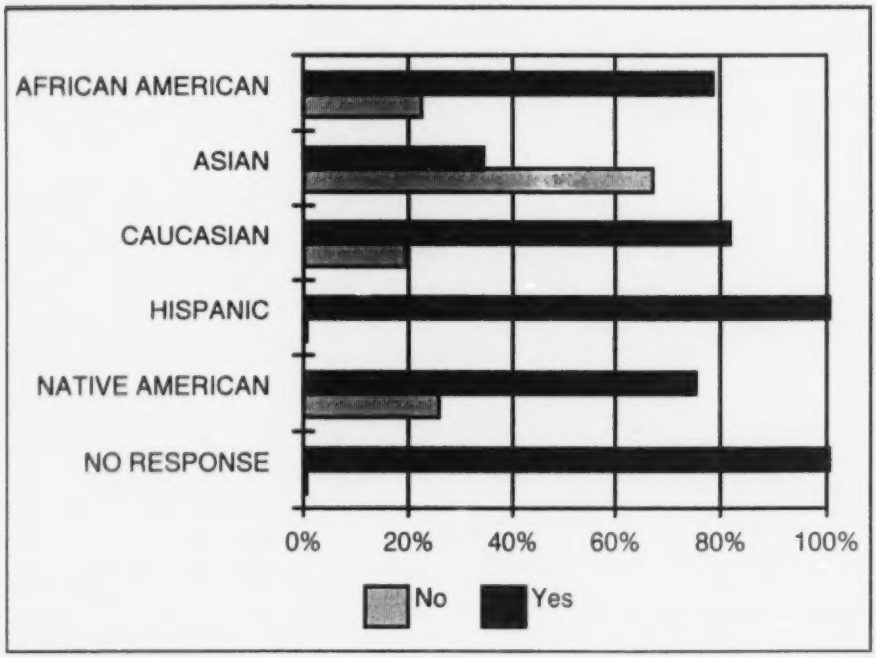

Figure 7. Degree to which simulation helped identify communications skills by ethnicity. (N=148)

24 (19%) said it did not help. All 3 (100%) of the Hispanics participating stated that they felt simulations helped them identify their communications skills. Native Americans students 3 (75%) reported that the simulation did help the identification process and 1 (25%) said it did not. Both of the No Response participants indicated that the simulation helped them identify their communications skills.

The second part of question 5 is shown in Figure 8, "Do you feel this simulation helped you improve your communications skills"? Again 7 (78%) of the African Americans that responded to this part of the question

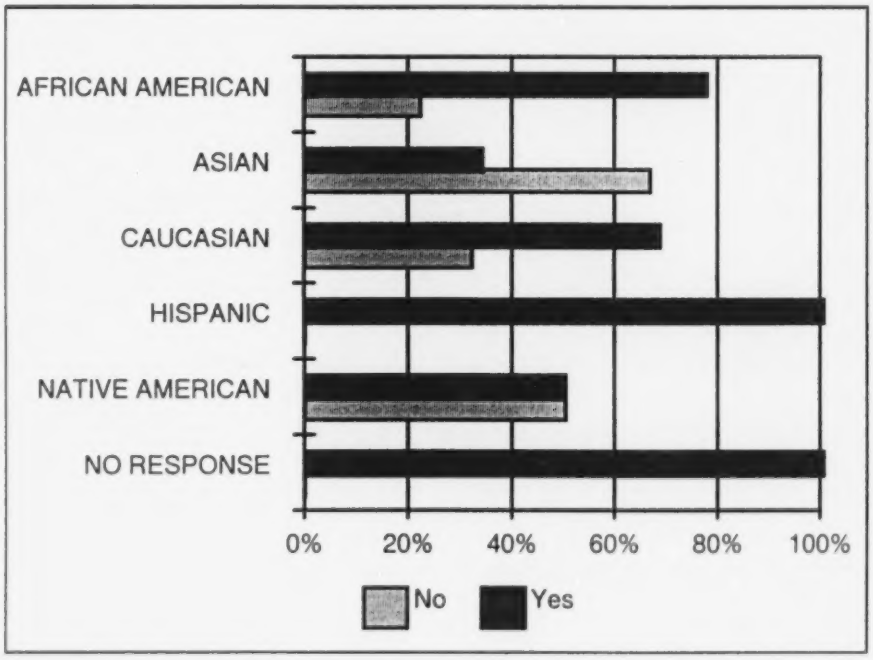

Figure 8. Degree to which simulation helped improve communications skills by ethnicity. (N=145)

said that simulations did help improve their communications skills; 2 (22%) of them said it did not help them improve. Only 1 (33%) of the Asians responded that simulations helped improve their skills while 2

(67%) said it did not. Participants in the Caucasian category indicated that 85 (69%) felt the simulations did help improve their communications skills, however 39 (31%) said it did not help them. Three (100%) of the Hispanic participants in the simulations indicated that the simulation helped them improve their communications skills. Native American participants showed that 2 (50%) of them felt the simulation helped them and 2 (50%) felt it did not. Both No Response participants stated that the simulation helped them improve their communications skills.

The classes used for participation in this study were selected for convenience from the university course offerings. Due to the dominant Caucasian ethnic factor, the results for the other ethnic groups may not be indicative of underlying characteristics. It is interesting to note, however, that the patterns of answers within these groups do show that the simulation was beneficial for all ethnic groups.

Qualitative Findings

A close review of discussions offered by students actively involved in the simulations in response to questions asked during the debriefing period (Attachment A) and written comments made by students on the Participants Survey (Attachment B) provides insight into the identification and improvement of communications skills characteristics as determined

by these students. An analysis of these comments shows strengths, weaknesses, and generalizations of the effectiveness of this simulation.

Many participants indicated that this activity helped them to identify communications skills. One student said "It helped me to pinpoint weak communications skills. They become obvious when you cannot communicate your desires or obtain the outcome you wanted." Another student indicated that "...you forget how important communication is and with this simulation, you notice the importance of it. It helped me notice which are my weak points to work on." Someone else stated that "I identified my own skills, something I never really thought about." Another comment was that "...it (the simulation) helps you realize that to make things happen, it is up to you to make a working relationship succeed." Several participants said that the simulation helped them improve their communications skills because they had to adjust their communications style to others. It made them aware of different strategies, techniques, and attitudes people use to communicate.

Through these simulations some participants identified listening as a strength. Several comments were: "If you don't listen to other people, how are you going to communicate effectively?", "...you can only listen and follow so many conversations at once...", and "...listening to one

another provides better communication." Others realized they were not listening when spoken to. Some observations made of other participants' listening skills were: some students did not listen effectively, other students did listen to others, and other students concentrated on what was be said to them. One person commented that "It's an amazing thing to listen, and not just hear." This apparent contradiction shows the individual level of experience that a simulation can provide.

A comment made by one participant was "Talking is the best communication skill we use. ..it is the clearest way we can communicate how we feel and what we think." Speaking very clearly, exactly, using good articulation, speaking calmly, being honest, and paying attention to what is said were strengths pointed out by several participants. Asking questions for clarification purposes and being assertive were pointed out as a form of good communications skills. One student said that his verbal skills were his best asset because communication between two people is important.

Some students preferred speaking to others on a "one to one" basis to avoid confusion and outside interference, which allows concentration on one person and conversation at a time. Others liked working in groups because "...I learned what group communication skills

you need to participate", "Team work ...was the most important in accomplishing our goal!", "I learned to communicate with people I just met", "...a group working together must communicate effectively in order to be efficient...". Other comments about working in groups included that groups can be disruptive, confusing, loud, with too much going on at the same time and not allowing for clarity or time to prepare a knowledgeable response. At the same time working in groups provided a way for those who tended to be shy or nervous to be drawn out and involved in active participation. Groups by themselves provide a learning environment that is conducive to identifying and improving communications skills. These comments again show that simulations can provide individualized learning experiences. Several observations of weaknesses of communications skills identified were: people who don't stop talking when they have said what they need to say, being loud, interrupting, being overly aggressive in attitudes, being unorganized, and the inability to listen and talk to several people at one time and understanding what each is saying. Through the use of this simulation, many students identified their own weaknesses as well as identifying weaknesses they saw in others.

Fewer than ten of the participants thought that the simulation itself did not help them improve their communication skills because they did not

have time during the actual activity to concentrate on communications. They had to keep up with the game at that point, for example, "...nothing too concrete can be determined because at the time, my sole focus was on completing the activity. Future activities will be easier because I will know that a larger percentage of the focus should be placed on the communication skills over the actual activity.", "I wasn't concentrating on communication skills, I was having too much fun". These ten did indicate, however, that though the time constraint of the class period did not allow them to improve their skills, they did realize what they needed to work on to improve their communications skills.

Some generalizations made by the participants were that they liked simulations in the classroom. It introduced them to the other students in the class using active participation which made them less nervous about a class, it broke the tension barrier between instructor and students, and it gave them immediate feedback from their communication efforts. Sometimes lectures during the whole class period can get boring according to some students. "Hands on learning is somewhat more effective than just hearing about it" said one student. Another student said "The simulation was helpful because it applied your skills instead of just listening to lectures." Still others said that they tend to learn better

from games and informal activities but do not mind listening to lectures from professors.

Several responses indicated that students wished they had known the real goal of the simulation before starting the activity. One participant indicated that although he did identify communications skills from the simulation, it created an environment where only the out-going people could be successful. It is interesting that only one participant stated the simulation was unorganized, the questions not worded in a way that communicates any idea of what they are asking, and that the whole game reflects horrible communication. These answers could possibly indicate an individual student's general view of something that happened at another time, not this specific communications simulation. As one student said "It (the simulation) did point out the skills that I have that may require work, and if we continue with these simulations, it will help my communications skills."

The comments presented here indicate that the participants of these simulations were able to identify their own strengths and weaknesses as well as those of others, providing them an effective awareness of these areas. It also appears that because of time

constraints, improvements of communications skills could not take place during the simulation.

Overall, the simulation was an effective tool for identifying communications skills and indicating areas that need improvement. The simulation also provided a means for students to get to know each other and work together in an interactive environment.

One Group/Time Series

In one class, the treatment was introduced at the beginning and again at the end of the term. The purpose of this repetition was to identify whether the same students recognized differences in how simulations identified and improved their communications skills over a period of time. The class chosen for this treatment was a class which included students from various academic majors and of academic levels Freshman through Seniors with a nearly even number of males and females. Ethnicity was not a consideration in this selection process. This particular class was chosen because the professors agreed in advance to allow multiple treatments.

The analysis of the Participant Survey responses revealed that the participants did not experience a marked awareness of increased identification or improvement in their communications skills over the

course of the semester. A review of some of the written comments from the last class indicated that several participants thought they may have improved on their personal listening and speaking skills. Generalized comments included items like: confidence was gained over the course of the semester and groups were more organized and communicated in a more professional manner although there was still a good deal of loudness around resulting in some confusion. The identification of communications skills continued with the respondents saying that skills had been refined somewhat but that most did not think they improved significantly from the first class. Several participants said that they had been made aware of their communications skills and practice would improve their skills. As with the comments from the first class, the last class indicated that this simulation moved too fast to allow concentration on communications skills and that because of the time their concentration was on the game. This could indicate that human resources specialists and others who make presentations to groups should slow down their delivery.

Overall, the simulation was an effective tool for participants of the same class to continue to identify communications skills and indicate areas that need improvement over a period of time. The last simulation

also provided a means for students to reflect on the improvement of their skills after getting to know each other and work together in an interactive environment for a semester.

Instructor Insights

The written Instructor Surveys analyze the use of a simulation to help in the teaching of communications. Insight gained from the Instructors' Surveys examines the effectiveness of using simulations to enhance the learning of communications skills.

The survey instrument used to provide information for analysis of the instructor portion of this study is in the form of a questionnaire (Appendix C). Instructors were from classes in which the simulations were done and consisted of academic disciplines of Economics, Finance, Education, and Adult and Technical Education. Several instructors taught more than one class that participated, therefore the total number of instructor participants was four. All instructors were present during the simulations.

A basis was established to determine what percentage of time various activities occurred in these instructors' classrooms of the same class the simulation was done during any given semester. It was determined that normally 60% of the total instructors' time in the

classrooms was designated to lectures enhanced with 29% audiovisuals, 27.5% of the total time was used with games, guests were utilized .25% of the time, and 4.25% of the total time in the classroom was used for computer related activities. Other activities shown to be used in these classrooms were cooperative study groups, role playing, and case studies.

All participating instructors felt that active participation in the simulation allowed students to identify their own barriers to communications skills. Some comments were that the simulation identified those adult students who were leaders and could communicate effectively and that students' skills improved as they participated. One instructor who uses simulations in this particular class each semester indicated that in situations where good communications skills are needed for success in completing a project, identification of personal skills is important. That instructor indicated that this simulation shows students that if they do not identify their skills and improve them, they will fail. Another instructor who concentrates mostly on using lectures in the classroom was genuinely surprised at the high level of interaction among students and how the simulation easily drew withdrawn students into active participation.

When instructors were asked if they felt the simulation was beneficial to improving communications skills, their responses included such comments as "Yes, it provides a more intense, personal experience" (Brozik) and "Yes it is, students need to communicate to finish their activities. By playing this game, students can identify their skills and they see that by changing certain things they do and say makes them more successful" (Zapalska). One instructor said that "The more opportunities adults have to communicate with a variety of different individuals, cultures, personal and career backgrounds, the more their communications skills improve" (Wyant). The structure and selection processes of this simulation were designed to include many opportunities for identification and improvement of students' communications skills. Another instructor who saw this simulation for the first time admitted that while watching the simulation take place, he may have been watching existing communications skills in a different context than that of improvement.

The instructors' written surveys revealed that using simulations in the classroom is "...an excellent teaching tool. Adults learn by Active Learning, and this is an excellent way to create active learning" (Wyant). Other comments indicated that simulations in classrooms "...allow each student a first person experience in material being taught and that

simulations vastly increase participation, however, it is difficult to estimate how often they could be used with good results" (Bickel).

Based on the fact that there were few instructor responses and that this was their one and only exposure to the simulation, there were few suggestions for improving the communications skills game. Perhaps if the simulation had been repeated several times in these classes and the instructors had time to concentrate on the processes of identifying and improving the students' skills, the instructors would have been able to provide more insight and suggestions for improving the simulation. One comment made by an instructor was "Let the students work out how to communicate effectively because they learn by doing" (Zapalska). At least one instructor said that with an even number of groups that trading occurs at a one to one level. For example, "If there are six trading groups, three transactions involving two groups will occur. It is suggested that using an odd number of trading groups will create a situation in which trades will be conducted between more than two groups thus creating an additional opportunity to identify different types of communications skills" (Brozik). The use of this proposed technique is cause for further research.

Overall, the Instructors Surveys indicated that simulations are an effective tool for use in the classrooms. The responses showed that instructors clearly think simulations can be used for students to identify and improve their communications skills. Instructors agreed that simulations are a valuable instrument to use for involving students in active participation and in creating an arena for the students to identify their strengths and weaknesses of their personal communications skills. By continuing the use of simulations, students are allowed to practice and improve their communications skills and can realize the value of their efforts through the successful completion of the activity.

SUMMARY/CONCLUSIONS, AND RECOMMENDATIONS

Summary/Conclusions

This simulation was an effective tool for participants of this study. It provided a means for students to get to know each other and work together in an interactive environment as well as to identify their personal communications skills and skills that need improvement. Analysis of the research questions provided the following findings.

1. Does the use of simulations/games help students learn communications skills?

All majors except Education indicated that the simulation did improve their skills. The largest number of participants responding to this question were Business majors. Slightly more than 50% of the Education majors did not feel this activity helped them learn. This may be an indication that these Education majors were older students in a graduate class and may have had more academic knowledge and experience in communications skills in their careers. It might also be a reflection of an older student's previous training habits. Over half of the Graduate level participants indicated that the simulation did not improve their communications skills. As with the variable of academic majors, these results could be attributed to their advanced educational level, career

experiences, and previous training. All other class level participants reported that simulations did help them improve their communications skills with Community College students reporting that 92% felt the simulation helped them learn.

2. Does participation in a simulation/game allow participants to identify their own level of communications skills?

The majority of all academic majors and class level participants strongly felt that the simulation helped them identify their communications skills. However, the largest number of participants to say that the simulation did not help them identify their skills were Education majors at the Graduate level. The reasons for this were not studied in this experiment, but as with the question of improving skills with the use of simulations, perhaps it can be attributed to an older student with more academic knowledge and career/work experience using communications. Kamii, 1985 (cited in Burk, 1996) indicated that deviating from the traditional lecture format in college/university classes can be a difficult adjustment for some adult students. Adult learners and educators must become more alert to the importance of alternative forms of learning, forms like simulations.

3. Does gender affect a person's ability to learn communications skills using simulations/games?

The number of females and males answering this question was almost equal, 76 and 73 respectively. It was interesting to note that a similar number of females and males said "yes" and "no" to the effectiveness of simulations in identifying and improving their communications skills. It was found that most females and males feel that the use of simulations did help them to identify and improve their communications skills. These results indicate that gender does not make a difference in the ability to learn communications skills using simulations.

Caucasians were the predominate participants in this study. Due to this factor no conclusions concerning Ethnicity can be drawn. It should be noted, however, that the majority of all ethnic groups found simulations beneficial to both learning and identifying their communications skills. Thornton, 1984 (cited in Galbraith, 1990) tells us that by the year 2000, it is anticipated that 29% of the total United States population will be comprised of minority group members. The fastest growing minority group are Asian Americans. Adult Education programs will need to find ways to serve these emerging population groups, and simulations could help.

4. Does the use of a simulation help in the teaching of communications skills?

Instructors indicated that simulations are an effective tool for use in the classroom. Not only do simulations help students to identify and improve their communications skills, but they also involve students in active participation which enhances learning. Instructors suggested that one isolated use of simulations may not be as beneficial to the students as repeated usage. All instructors agreed that using simulations was an effective teaching tool.

General comments made by the participants of these simulations indicated that the students enjoyed this type of interactive activity in the classroom. They were able to identify their strengths and weaknesses as well as those of others. It also appears that because of time constraints students did not feel they improved their communications skills during the simulation.

These first few experiments show the value of using simulations as an interactive teaching method for learning communications skills in Adult Education. Simulations can teach language arts effectively according to DeVries & Salvin (1976) and Frederiksen, et al., (1983), particularly when specific objectives are targeted. This experiment shows that simulations

can be used in various academic majors and for all class levels to identify and improve communications skills. This study further indicated that the effectiveness of simulations could be enhanced by tailoring them for specific courses and groups of students. With additional usage and refinement of the simulation, students should be able to improve their employment possibilities by developing the skills they have identified through this activity. Adult educators could employ simulations in their classes to create environments that stimulate adult student learning.

Recommendations

The success of these experiments shows that simulations can be used as an effective teaching tool for identifying and improving communications skills for teaching adults. It is recommended that research in this area continue so that simulations can be developed for specific classes in order to maximize the effectiveness of this teaching technique.

Suggestions for Further Research

It has been recommended that future studies are needed before the use of simulations could be strongly recommended in the field of Language Arts, but given the interest that simulations evoke and allowing for different learning styles, using simulations should be considered.

Students show more interest in simulations than in traditional classroom instruction. This level of interest is sufficient reason to further explore the feasibility of communications skills simulations in adult learning processes.

Clearly the topic of groups in adult education needs more attention. Although there appears to be significant research on groups and group processes in other disciplines, it has been a neglected area in adult education research in recent years. Additional areas that could provide opportunities for future research are as follows.

1. Studies of populations other than those used in this experiment, allowing for an examination of the generalization of the use of simulations.
2. Studies of older adult students learning styles.
3. Studies to identify the reason Education majors do not think simulations improve their communications skills.
4. Studies to identify the reason Graduate students do not think simulations improve their communications skills.
5. Studies of how simulations affect various ethnic groups in the processes of identification and improvement of communications skills.
6. Studies of whether sociocultural variables impact adult learning.

This investigation of the use of simulations to teach communications skills has shown the value of this technique. Further work needs to be done to continue the development of this technique for application in other areas and disciplines.

Appendix A

Debriefing Topics for Discussion

1. Inter-group communications:
   a. How many people in your group were talking?
   b. How did you feel about talking to each other?
   c. Did you understand what people were saying to you?
   d. Did all members of your group understand what was happening?
   e. How many people in your group did the talking for the trading exercise?
   f. If only one speaker in your group was chosen to do the talking, how and why was that person chosen?
   g. If more than one speaker did the talking, how and why were they chosen?

2. Intra-group Communications
   a. How many things could you hear at one time?
   b. Did you have trouble breaking into a group discussion that was taking place? Why?
   c. Were people in other groups clear about what they meant when they were talking to you?

3. Learning Communication Skills
   a. How did you feel about many people talking to you at one time?
   b. How did your feelings affect your performance in this activity?

4. Usefulness of Simulations
   a. How do you feel about using simulations for classroom learning?
   b. What suggestions do you have for more clear communications skills learning?
   c. What additional comments do you have?

Appendix B

Participant Survey

To be taken home and given to your instructor at the next class session.
(Use back of page for your comments if necessary.)

Demographic Data to go here.

Class Class Level Gender

Date Ethnic Origin Sex

Home location: City Rural

1.What was your personal best example of communications skills, and why do you think this was the best?

2. What was the best communications skills you saw anyone else do and why?

3. What was your personal weakest example of communications skills, and why do you think they were the weakest?

4. What was the weakest communication skills you saw anyone else do and why?

5. Do you feel this simulation helped you learn communications skills?

Appendix C

Instructor Questions

1. Do you feel that active participation in the game allowed your students to identify their own barriers to communications skills, and why?

2. Do you feel that the game is a beneficial way for improving communication skills, and why?

3. Do you feel that the use of games in the classroom is a beneficial teaching tool, and why?

4. What suggestions do you have that would improve the communications skills game?

_____

Class/Date

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